

ABSTRACT OF THE DISCLOSURE

Compositions and methods are disclosed for preventing the oxidative corrosion of metal surfaces by exposing such a surface to an anti-corrosion agent characterized as a lower alkyl carboxylic acid or salts and/or other derivatives that conserve or embody the lower alkyl carboxylic acid moiety present in their molecular structure. The anti-corrosion agent may be used in combination with a material capable of forming a moisture retentive barrier over the metal surface. Compositions and methods of preparing food and/or beverage preservatives or stabilizers are also disclosed. To prepare a preservative composition, an ingestible anti-corrosion agent, such as an ingestible agent including a lower alkyl carboxylic acid moiety, is combined with a suitable food grade polymer. The anti-corrosion agent and polymer are admixed in a particular order to maximize the preservative properties thereof. The compositions and methods of the invention provide a practical, non-toxic way, e.g., of ensuring anti-corrosion protection for metals, or devices containing exposed metals, stored or operated in water or in the presence of water vapor. Exemplary, non-exhaustive uses of the invention include employing the composition as lubricant for the surface of a metal or as a pump oil or brake fluid; using the composition as an undercoating for painting, electro-plating or electro-polishing procedures; and providing a protective coating for any metal or metal-containing machine or device, from automotive assembly plant metal press machines to electronic circuit boards.

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